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# A BILL FOR AN ACT

RELATING TO ENERGY.

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:**

1       SECTION 1. The legislature finds that Hawaii's dependence  
2       on petroleum for about ninety per cent of its energy needs is  
3       more than any other state in the nation. This dependence makes  
4       the state extremely vulnerable to any oil embargo, supply  
5       disruption, international market dysfunction, and many other  
6       factors beyond the control of the state. Furthermore, the  
7       continued consumption of conventional petroleum fuel negatively  
8       impacts the environment.

9       The legislature also finds that increased energy efficiency  
10      and use of renewable energy resources would increase Hawaii's  
11      energy self-sufficiency, achieving broad societal benefits,  
12      including increased energy security, resistance to increases in  
13      oil prices, environmental sustainability, economic development,  
14      and job creation.

15      Over the years, the legislature has worked steadily to  
16      encourage the deployment of renewable energy resources and  
17      energy efficiency initiatives. This includes but is not limited  
18      to:



(1) Establishing a net energy metering program,  
interconnection standards, and renewable energy tax  
credits;

(2) Establishing greenhouse gas and energy consumption  
reduction goals for state facilities and requiring the  
use of energy efficient products in state facilities;  
and

(3) Providing incentives for the deployment of solar  
energy devices.

The legislature also established an enforceable renewable energy  
portfolio standard, under which twenty per cent of Hawaii's  
electricity is to be generated from renewable resources by the  
end of 2020.

To shape Hawaii's energy future and achieve the goal of  
energy self-sufficiency for the State of Hawaii, our efforts  
must continue on all fronts, integrating new and evolving  
technologies and providing incentives and assistance to address  
barriers.

The purpose of this Act is to provide a comprehensive  
approach to achieving energy self-sufficiency for the state by:

(1) Increasing the renewable energy technologies income  
tax credit for certain solar-thermal, wind-powered,



1 and photovoltaic energy systems and removing the tax  
2 credits' 2008 sunset date;

3 (2) Authorizing the issuance of general obligation bonds  
4 to develop and implement a pilot project to install  
5 photovoltaic systems at public schools on the islands  
6 of Oahu, Hawaii, Maui, and Kauai;

7 (3) Promoting the use of green building practices by  
8 requiring each county agency that issues building,  
9 construction, or development-related permits to  
10 establish a procedure for priority processing of  
11 permit applications for construction projects  
12 incorporating Leadership in Energy and Environmental  
13 Design building standards;

14 (4) Authorizing the issuance of general obligation bonds  
15 to bring state facilities into compliance with the  
16 purposes of Act 77, Session Laws of Hawaii 2002,  
17 which, among other things, establishes greenhouse gas  
18 and energy consumption reduction goals for state  
19 facilities; and

20 (5) Establishing the pay as you save pilot project to  
21 provide a financing mechanism to make purchases of



1 residential solar hot water heater systems more  
2 affordable.

3 This Act shall be called the Energy Self-Sufficiency Act of  
4 2006.

5 PART I. RENEWABLE ENERGY TECHNOLOGIES INCOME TAX CREDIT

6 SECTION 2. Section 235-12.5, Hawaii Revised Statutes, is  
7 amended as follows:

8 1. By amending subsection (a) to read:

9 "(a) When the requirements of subsection (c) are met, each  
10 individual or corporate resident taxpayer that files an  
11 individual or corporate net income tax return for a taxable year  
12 may claim a tax credit under this section against the Hawaii  
13 state individual or corporate net income tax. The tax credit  
14 may be claimed for every eligible renewable energy technology  
15 system that is installed and placed in service by a taxpayer  
16 during the taxable year. This credit shall be available for  
17 systems installed and placed in service after June 30, 2003.

18 The tax credit may be claimed as follows:

19 (1) Solar thermal energy systems for:

20 (A) Single-family residential property: thirty-five  
21 per cent of the actual cost or [~~\$1,750,~~] \$2,250,  
22 whichever is less;



1 (B) Multi-family residential property: thirty-five  
2 per cent of the actual cost or \$350 per unit,  
3 whichever is less; and

4 (C) Commercial property: thirty-five per cent of the  
5 actual cost or \$250,000, whichever is less;

6 (2) Wind-powered energy systems for:

7 (A) Single-family residential property: twenty per  
8 cent of the actual cost or \$1,500, whichever is  
9 less;

10 (B) Multi-family residential property: twenty per  
11 cent of the actual cost or \$200 per unit,  
12 whichever is less; and

13 (C) Commercial property: twenty per cent of the  
14 actual cost or [~~\$250,000~~] \$500,000, whichever is  
15 less; and

16 (3) Photovoltaic energy systems for:

17 (A) Single-family residential property: thirty-five  
18 per cent of the actual cost or [~~\$1,750~~] \$5,000,  
19 whichever is less;

20 (B) Multi-family residential property: thirty-five  
21 per cent of the actual cost or \$350 per unit,  
22 whichever is less; and



1 (C) Commercial property: thirty-five per cent of the  
2 actual cost or [~~\$250,000,~~] \$500,000, whichever is  
3 less;

4 provided that multiple owners of a single system shall be  
5 entitled to a single tax credit; and provided further that the  
6 tax credit shall be apportioned between the owners in proportion  
7 to their contribution to the cost of the system.

8 In the case of a partnership, S corporation, estate, or  
9 trust, the tax credit allowable is for every eligible renewable  
10 energy technology system that is installed and placed in service  
11 by the entity. The cost upon which the tax credit is computed  
12 shall be determined at the entity level. Distribution and share  
13 of credit shall be determined pursuant to section 235-110.7(a)."

14 2. By amending subsection (c) to read:

15 "(c) [~~The~~] For taxable years beginning after December 31,  
16 2005, the dollar amount of [~~any new federal energy tax credit~~  
17 ~~similar to the credit provided in this section that is~~  
18 ~~established after June 30, 2003, and~~] any utility rebate[~~7~~]  
19 shall be deducted from the cost of the qualifying system and its  
20 installation before applying the state tax credit."

21 SECTION 3. Act 207, Session Laws of Hawaii 2003, is  
22 amended by amending section 4 to read as follows:



1 "SECTION 4. This Act shall take effect on July 1, 2003[  
2 ~~and shall be repealed January 1, 2008~~]."

3 PART II. RENEWABLE ENERGY AND ENERGY EFFICIENCY

4 IN HAWAII'S PUBLIC SCHOOLS

5 SECTION 4. The director of finance is authorized to issue  
6 general obligation bonds in the sum of \$5,000,000, or so much  
7 thereof as may be necessary, and the same sum or so much thereof  
8 as may be necessary is appropriated for fiscal year 2006-2007  
9 for the purpose of developing and implementing a photovoltaic,  
10 net energy metered pilot project in public schools. The project  
11 sites shall be determined by the department of education as most  
12 suitable in meeting the pilot project's objectives. The project  
13 objectives are as follows:

14 (1) To have, at minimum, a project site at one public  
15 school on each of the islands of Oahu, Hawaii, and  
16 Kauai, and one public school within the county of  
17 Maui;

18 (2) To allow installation of photovoltaic systems to be  
19 timed in conjunction with substantial roof repairs or  
20 roof replacement of the building to further reduce  
21 project costs;



(3) To use the application of net energy metering to offset costs of the system;

(4) To recapture system costs within three-quarters of the useful life of the photovoltaic system; and

(5) When advantageous, to use energy-savings contracts such as third party lease/purchase contracts to maximize the objectives of this section.

The sum appropriated shall be expended by the department of education.

The department of education shall submit an interim report on the pilot project to the legislature no later than twenty days prior to the convening of the regular session of 2007 and a final report to the legislature no later than twenty days prior to the convening of the regular session of 2008.

PART III. ENERGY EFFICIENCY FOR STATE FACILITIES,  
MOTOR VEHICLES, AND EQUIPMENT

SECTION 5. Chapter 196, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

**"§196- Energy efficiency for state facilities and vehicles.** (a) Each agency is directed to implement, to the





1 extent possible, the following goals during planning and budget  
2 preparation and during program implementation.

3 (b) With regard to buildings and facilities, each agency  
4 shall:

5 (1) Design and construct buildings meeting United States  
6 Green Building Council's leadership in energy and  
7 environmental design standards. As appropriate for  
8 the type of construction, the buildings should meet  
9 leadership in energy and environmental design silver  
10 certification for new commercial construction and  
11 major renovation, leadership in energy and  
12 environmental design for existing building operations,  
13 and leadership in energy and environmental design for  
14 commercial interiors; provided that if leadership in  
15 energy and environmental design silver certification  
16 is not possible, at minimum, commissioning and retro-  
17 commissioning, as well as completion of the  
18 appropriate leadership in energy and environmental  
19 design checklist, shall be implemented following  
20 leadership in energy and environmental design silver  
21 standards for new construction and major renovation or



1       leadership in energy and environmental design for  
2       existing building operations;

3       (2) Incorporate energy efficiency measures to prevent heat  
4       gain in residential facilities of three stories and  
5       below to provide R-19 or equivalent on roofs, R-11 or  
6       equivalent in walls, and high-performance windows to  
7       minimize heat gain and, if air conditioned, minimize  
8       cool air loss. Where possible, buildings shall be  
9       oriented to maximize natural ventilation and day-  
10       lighting without heat gain and to optimize solar for  
11       water heating. This provision shall apply to new  
12       residential facilities built using any portion of  
13       state funds or located on state lands. For the  
14       purposes of this paragraph, "R-value" means the  
15       constant time rate resistance to heat flow through a  
16       unit area of a body induced by a unit temperature  
17       difference between the surfaces, and is a measure of  
18       the thermal resistance of building envelope components  
19       such as roof and walls. The higher the R-value, the  
20       greater the resistance to heat flow;

21       (3) Install solar water heating systems where it is cost-  
22       effective, based on a comparative analysis to



1 determine the cost-benefit of using a conventional  
2 water heating system or a solar water heating system.

3 The analysis shall be based on the projected life  
4 cycle costs to purchase and operate the water heating  
5 system. If the life cycle analysis is positive, the  
6 facility shall incorporate solar water heating. If  
7 water heating entirely by solar is not cost-effective,  
8 the analysis shall evaluate the life cycle, cost-  
9 benefit of solar water heating for preheating water.

10 If a multi-story building is centrally air  
11 conditioned, heat recovery shall be employed as the  
12 primary water heating system. Single-family  
13 residential clients of the department of Hawaiian home  
14 lands and any agency or program that can take  
15 advantage of utility rebates are exempted from this  
16 requirement so they may continue to qualify for  
17 utility rebates for solar water heating;

18 (4) Implement water and energy efficiency practices in  
19 operations to reduce waste and increase conservation;

20 (5) Incorporate principles of waste minimization and  
21 pollution prevention, such as reducing, revising, and  
22 recycling, as a standard operating practice in



1 programs, including programs for construction and  
2 demolition of waste management and office paper and  
3 packaging recycling programs;

4 (6) Use life cycle cost-benefit analysis to purchase  
5 energy efficient equipment such as ENERGY STAR  
6 products and use utility rebates where available to  
7 reduce purchase and installation costs; and

8 (7) Procure environmentally preferable products, including  
9 but not limited to recycled and recycled-content, bio-  
10 based, and other resource-efficient products and  
11 materials.

12 (c) With regard to transportation fuel, each agency shall:

13 (1) Comply with Title 10, Code of Federal Regulations,  
14 Part 490, Subpart C, "Mandatory State Fleet Program",  
15 if applicable;

16 (2) Comply with all applicable state laws regarding  
17 vehicle purchases;

18 (3) Once federal and state vehicle purchase mandates have  
19 been satisfied, purchase the most fuel-efficient  
20 vehicles that meet the needs of their programs;  
21 provided that life cycle cost-benefit analysis of  
22 vehicle purchases shall include projected fuel costs;



- 1        (4) Purchase alternative fuels and ethanol blended  
2        gasoline when available;
- 3        (5) Evaluate a purchase preference for biodiesel blends,  
4        as applicable to agencies with diesel fuel purchases;
- 5        (6) Promote efficient operation of vehicles;
- 6        (7) Use the most appropriate minimum octane fuel; provided  
7        that vehicles shall use 87-octane fuel unless the  
8        owner's manual for the vehicle states otherwise or the  
9        engine experiences knocking or pinging;
- 10       (8) Beginning with fiscal year 2005-2006 as the baseline,  
11       collect and maintain, for the life of each vehicle  
12       acquired, the following data:
- 13       (A) Vehicle acquisition cost;
- 14       (B) United States Environmental Protection Agency  
15       rated fuel economy;
- 16       (C) Vehicle fuel configuration, such as gasoline,  
17       diesel, flex-fuel gasoline/E85, and dedicated  
18       propane;
- 19       (D) Actual in-use vehicle mileage;
- 20       (E) Actual in-use vehicle fuel consumption; and
- 21       (F) Actual in-use annual average vehicle fuel  
22       economy;



1           and

2           (9) Beginning with fiscal year 2005-2006 as the baseline  
3           with respect to each agency that operates a fleet of  
4           thirty or more vehicles, collect and maintain, in  
5           addition to the data in paragraph (8), the following:

6           (A) Information on the vehicles in the fleet,  
7           including vehicle year, make, model, gross  
8           vehicle weight rating, and vehicle fuel  
9           configuration;

10          (B) Fleet fuel usage, by fuel;

11          (C) Fleet mileage; and

12          (D) Overall annual average fleet fuel economy and  
13          average miles per gallon of gasoline and diesel."

14          SECTION 6. Section 196-1, Hawaii Revised Statutes, is  
15          amended to read as follows:

16          "**§196-1 Findings and declaration of necessity.** The  
17          legislature finds that:

18          (1) ~~[There is widespread shortage of]~~ The global demand  
19          for petroleum and its derivatives [which] has caused  
20          severe economic hardships throughout the State and  
21          ~~[which]~~ threatens to impair the public health, safety  
22          and welfare.



1           ~~[The current energy crisis is caused by a global~~  
2           ~~energy shortage which will worsen through the~~  
3           ~~remainder of this decade and may continue to the end~~  
4           ~~of this century.]~~ The State of Hawaii, with its total  
5           dependence for energy on imported fossil fuel, is  
6           particularly vulnerable to dislocations in the global  
7           energy market. This is an anomalous situation, as  
8           there are few places in the world so generously  
9           endowed with natural energy: geothermal, solar  
10          radiation, ocean temperature differential, wind,  
11          waves, and currents--all potential non-polluting power  
12          sources.

- 13          (2) There is a real need for strategic comprehensive  
14          planning in the effort towards achieving full  
15          utilization of Hawaii's energy resource programs and  
16          the most effective allocation of energy resources  
17          throughout the State. Planning is necessary and  
18          desirable in order that the State may recognize and  
19          declare the major problems and opportunities in the  
20          field of energy resources. Both short-range and long-  
21          range planning will permit the articulation of broad  
22          policies, goals, and objectives; criteria for



1 measuring and evaluating accomplishments of  
2 objectives; identification and implementation of  
3 programs [~~which~~] that will carry out such objectives;  
4 and a determination of requirements necessary for the  
5 optimum development of Hawaii's energy resources.

6 Such planning efforts will identify present conditions  
7 and major problems relating to energy resources, their  
8 exploration, development, production, and  
9 distribution. It will show the projected nature of  
10 the situation and rate of change and present  
11 conditions for the foreseeable future based on a  
12 projection of current trends in the development of  
13 energy resources in Hawaii.

- 14 (3) There are many agencies of the federal, state, and  
15 county governments in Hawaii, as well as many private  
16 agencies, engaged in, or expressing an interest in,  
17 various aspects of the exploration, research,  
18 distribution, conservation, and production of all  
19 forms of energy resources in Hawaii. Some of these  
20 agencies include the University of Hawaii, the  
21 department of land and natural resources, the  
22 department of business, economic development, and





1           tourism, the consumer protection, the federal energy  
2           office, and various county agencies, as well as the  
3           oil companies, gas stations, and other private  
4           enterprises.

5           (4) There is immediate need to coordinate the efforts of  
6           all these agencies, establish and coordinate programs  
7           to effectuate the conservation of fuel, to provide for  
8           the equitable distribution thereof, and to formulate  
9           plans for the development and use of alternative  
10          energy sources. There is a need for such coordination  
11          so that there will be maximum conservation and  
12          utilization of energy resources in the State."

13          SECTION 7. Section 196-18, Hawaii Revised Statutes, is  
14          amended by amending subsections (a) and (b) to read as follows:

15          "(a) The coordinator shall appoint an advisory committee  
16          consisting of representatives from:

17           (1) State agencies~~[+]~~, including but not limited to the  
18           University of Hawaii;

19           ~~[(2) County governments;~~

20           ~~+(3)]~~ (2) Energy service companies;

21           ~~[(4)]~~ (3) Utility companies;

22           ~~[(5)]~~ (4) Equipment manufacturers;



- 1       ~~[(+6)]~~ (5) Construction and architectural companies;  
2       ~~[(+7)]~~ (6) Environmental, energy, and consumer groups; and  
3       ~~[(+8)]~~ (7) Other energy-related organizations.

4       (b) The committee shall provide input on state energy  
5 management, including how to:

- 6       (1) Improve the use of energy-savings performance  
7             contracts and utility energy-efficiency service  
8             contracts;  
9       (2) Improve procurement of ENERGY STAR and other energy  
10            efficient products;  
11       (3) Improve building design;  
12       (4) Reduce ~~[process]~~ energy use; ~~[and]~~  
13       (5) Enhance applications of efficient and renewable energy  
14            technologies at state facilities~~[-]~~;  
15       (6) Establish benchmarks and evaluate the State's progress  
16           in incorporating energy efficiency and conservation  
17           for state facilities, vehicles, and equipment;  
18       (7) Make recommendations on how and when to conduct  
19           periodic energy audits; and  
20       (8) Make recommendations to the legislature no later than  
21           twenty days prior to the convening of each regular  
22           session, starting with the 2008 regular session, for



1           policy or other statutory changes to carry out the  
2           purposes of this chapter."

3           SECTION 8. Section 196-21, Hawaii Revised Statutes, is  
4 amended as follows:

5           1. By amending subsection (a) to read:

6           "(a) Agencies shall maximize their use of available  
7 alternative financing contracting mechanisms, including energy-  
8 savings [~~performance~~] contracts and utility energy-efficiency  
9 service contracts, when life-cycle cost-effective, to reduce  
10 energy use and cost in their facilities and operations. Energy-  
11 savings contracts shall include but are not limited to:

12           (1) Energy-savings performance contracts;

13           (2) Municipal lease/purchase financing; and

14           (3) Utility energy efficiency service contracts.

15 Energy-savings [~~performance~~] contracts and utility energy-  
16 efficiency service contracts shall provide significant  
17 opportunities for making state facilities more energy efficient  
18 at no net cost to taxpayers."

19           2. By amending subsection (c) to read as follows:

20           "(c) Notwithstanding any law to the contrary relating to  
21 the award of public contracts, any agency desiring to enter into



1 an [~~energy performance~~] energy-savings contract shall do so in  
2 accordance with the following provisions:

3 (1) The agency shall issue a public request for proposals,  
4 advertised in the same manner as provided in chapter  
5 103D, concerning the provision of energy efficiency  
6 services or the design, installation, operation, and  
7 maintenance of energy equipment, or both. The request  
8 for proposals shall contain terms and conditions  
9 relating to submission of proposals, evaluation, and  
10 selection of proposals, financial terms, legal  
11 responsibilities, and other matters as may be required  
12 by law and as the agency determines appropriate;

13 (2) Upon receiving responses to the request for proposals,  
14 the agency may select the most qualified proposal or  
15 proposals on the basis of the experience and  
16 qualifications of the proposers, the technical  
17 approach, the financial arrangements, the overall  
18 benefits to the agency, and other factors determined  
19 by the agency to be relevant and appropriate;

20 (3) The agency thereafter may negotiate and enter into an  
21 [~~energy performance~~] energy-savings contract with the  
22 person or company whose proposal is selected as the



1 most qualified based on the criteria established by  
2 the agency;

3 (4) The term of any [~~energy performance~~] energy-savings  
4 contract entered into pursuant to this section shall  
5 not exceed fifteen years;

6 (5) Any [~~energy performance~~] energy-savings contract may  
7 provide that the agency ultimately shall receive title  
8 to the energy system being financed under the  
9 contract; and

10 (6) Any [~~energy performance~~] energy-savings contract shall  
11 provide that total payments shall not exceed total  
12 savings."

13 SECTION 9. Section 196-22, Hawaii Revised Statutes, is  
14 amended to read as follows:

15 "**§196-22 State energy projects.** State energy projects may  
16 be implemented under this chapter with the approval of the  
17 comptroller and the director of finance. Notwithstanding  
18 section 36-41 or 196-21, the comptroller or the senior agency  
19 official of the department of accounting and general services,  
20 along with the director of finance, may exempt a state energy  
21 project from the advertising and competitive bidding  
22 requirements of section 36-41 or 196-21 and chapter 103, if the



1 comptroller deems exemption appropriate for energy projects with  
2 proprietary technology or necessary to meet the goals of the  
3 legislature. In addition, this section shall be construed to  
4 provide the greatest possible flexibility to agencies in  
5 structuring agreements entered into so that economic benefits  
6 and existing energy incentives may be used and maximized and  
7 financing and other costs to agencies may be minimized. The  
8 specific terms of [~~energy performance~~] energy-savings  
9 contracting under section 36-41 may be altered if deemed  
10 advantageous to the agency and approved by the director of  
11 finance and the senior agency official."

12 SECTION 10. Section 196-23, Hawaii Revised Statutes, is  
13 amended to read as follows:

14 "[~~§~~§196-23[~~§~~] **Energy efficient products.** (a) Agencies  
15 shall select, where life-cycle cost-effective, ENERGY STAR and  
16 other energy efficient products when acquiring energy-using  
17 products. For product groups where ENERGY STAR labels are not  
18 yet available, agencies may select products that are in the  
19 upper twenty-five per cent of energy efficiency as designated by  
20 the United States Department of Energy, Office of Energy  
21 Efficiency and Renewable Energy, Federal Energy Management  
22 Program.



1        Agencies shall incorporate energy efficient criteria  
2        consistent with designated energy efficiency levels [~~into all~~  
3        ~~guide specifications and project specifications developed for~~  
4        ~~new construction and renovation, as well as~~] into product  
5        specification language developed for all purchasing procedures.

6        The State shall also consider the creation of financing  
7        agreements with private sector suppliers to provide private  
8        funding to offset higher up-front costs of efficient products.

9        [~~(b) Agencies shall strive to meet the ENERGY STAR~~  
10       ~~building criteria for energy performance and indoor~~  
11       ~~environmental quality in their eligible facilities to the~~  
12       ~~maximum extent practicable by December 31, 2005. Agencies may~~  
13       ~~use energy savings performance contracts, utility energy-~~  
14       ~~efficiency service contracts, or other means to conduct~~  
15       ~~evaluations and make improvements to facilities. Facilities~~  
16       ~~that rank in the top twenty-five per cent in energy efficiency~~  
17       ~~relative to comparable commercial and state buildings shall~~  
18       ~~receive the ENERGY STAR building label or its equivalent as~~  
19       ~~determined by the coordinator. Agencies shall integrate this~~  
20       ~~rating tool into their general facility audits.~~

21       ~~(c) The State shall employ sustainable design principles~~  
22       ~~and agencies shall apply the principles to the siting, design,~~



~~and construction of new facilities. Agencies shall optimize life cycle costs, pollution, and other environmental and energy costs associated with the construction, life cycle operation, and decommissioning of the facility. Agencies shall consider using energy savings performance contracts or utility energy efficiency service contracts to aid them in constructing sustainably designed buildings.~~

~~(d)]~~ (b) Agencies entering into leases, including the renegotiation or extension of existing leases, shall incorporate lease provisions that encourage energy and water efficiency wherever life-cycle cost-effective. Build-to-suit lease solicitations shall contain criteria encouraging sustainable design and development, energy efficiency, and verification of facility performance. Agencies shall include a preference for facilities having an ENERGY STAR building label in their selection criteria for acquiring leased facilities. In addition, all agencies shall encourage lessors to apply for an ENERGY STAR building label and to explore and implement projects that will reduce costs to the State, including projects carried out through the lessors' energy-savings [~~performance~~] contracts [~~or utility energy efficiency service contracts~~].





1       ~~[(e) Agencies shall implement energy reduction systems,~~  
2       ~~and other highly efficient systems, in new construction or~~  
3       ~~retrofit projects when life-cycle cost effective. Agencies~~  
4       ~~shall consider combined cooling, heat, and power systems when~~  
5       ~~determined to be the most cost effective when measured against~~  
6       ~~other alternatives on a life-cycle cost basis. Agencies shall~~  
7       ~~survey local natural resources to optimize use of available~~  
8       ~~solar, ocean thermal, biomass, bioenergy, geothermal, or other~~  
9       ~~naturally occurring energy sources.~~

10       ~~(f) Agencies shall use off-grid generation systems,~~  
11       ~~including solar hot water, solar electric, solar outdoor~~  
12       ~~lighting, small wind turbines, fuel cells, and other off-grid~~  
13       ~~alternatives, where such systems are life-cycle cost effective~~  
14       ~~and offer benefits including energy efficiency, pollution~~  
15       ~~prevention, source energy reductions, avoided infrastructure~~  
16       ~~costs, or expedited service.] "~~

17       SECTION 11. The director of finance is authorized to issue  
18       general obligation bonds in the sum of \$25,000,000 or so much  
19       thereof as may be necessary and the same sum or so much thereof  
20       as may be necessary, is appropriated for fiscal year 2006-2007  
21       for the purposes of carrying out the purposes of part III of



1 this Act regarding energy efficiency for state facilities,  
2 vehicles, and equipment.

3 The sum appropriated shall be expended by the department of  
4 accounting and general services.

5 SECTION 12. The director of finance is authorized to issue  
6 general obligation bonds in the sum of \$25,000,000 or so much  
7 thereof as may be necessary, and the same sum or so much thereof  
8 as may be necessary is appropriated for fiscal year 2006-2007  
9 for the purposes of carrying out the purposes of part III of  
10 this Act regarding energy efficiency for state facilities,  
11 vehicles, and equipment.

12 The sum appropriated shall be expended by the department of  
13 education.

14 SECTION 13. There is appropriated out of the general  
15 revenues of the State of Hawaii the sum of \$ or so much  
16 thereof as may be necessary for fiscal year 2006-2007 for the  
17 purpose of allocating one full-time energy efficiency  
18 coordinator position to address energy efficiency in department  
19 of education facilities.

20 The sum appropriated shall be expended by the department of  
21 education for the purposes of this section.



1       SECTION 14. The appropriations made for the capital  
2 improvement projects authorized by this part shall not lapse at  
3 the end of the fiscal biennium for which the appropriation is  
4 made; provided that all moneys from the appropriation  
5 unencumbered as of June 30, 2008, shall lapse as of that date.

6       SECTION 15. Section 196-8, Hawaii Revised Statutes, is  
7 repealed.

8       ["~~§196-8~~ ~~Energy efficiency policy review and evaluation.~~"]

9       ~~(a) The energy resources coordinator shall ensure that review~~  
10 ~~and evaluation comparable to those accomplished by the energy-~~  
11 ~~efficiency policy task force established pursuant to Act 163,~~  
12 ~~Session Laws of Hawaii 1998, are undertaken, and that the~~  
13 ~~findings and recommendations of the review and evaluation are~~  
14 ~~reported to the legislature no later than twenty days prior to~~  
15 ~~the convening of the regular session of 2007.~~

16       ~~(b) The review and evaluation shall include:~~

17       ~~(1) The efficacy of section 235-12.5 to determine whether~~  
18 ~~the tax credits should be continued or enhanced based~~  
19 ~~on impact and cost-benefit analyses or other public~~  
20 ~~policy considerations;~~



~~(2) Whether the energy technology systems eligible for tax credits under section 235-12.5 should be expanded, reduced, or remain the same; and~~

~~(3) Any other issue regarding energy technology systems identified during the seven-year review.~~

~~(c) The energy resources coordinator, in undertaking the review and evaluation, shall consult with representatives from:~~

- ~~(1) The department of business, economic development, and tourism;~~
- ~~(2) The solar, wind, and photovoltaic industries;~~
- ~~(3) The utilities industry;~~
- ~~(4) The building industry; and~~
- ~~(5) Any other professional or public sector group the energy resources coordinator deems appropriate." ]~~

SECTION 16. Section 196-12, Hawaii Revised Statutes, is repealed.

~~[ "**~~§196-12~~** **Greenhouse gases reduction goal.** Through life-cycle cost-effective energy measures, each agency shall reduce its greenhouse gas emissions attributed to facility energy use by thirty per cent by January 1, 2012, compared to emission levels in calendar year 1990. In order to encourage optimal investment in energy improvements, agencies may count~~



1 ~~greenhouse gas reductions from improvements in non-facility~~  
2 ~~energy use toward this goal to the extent that these reductions~~  
3 ~~are approved by the coordinator." ]~~

4 SECTION 17. Section 196-13, Hawaii Revised Statutes, is  
5 repealed.

6 [ "~~§196-13~~ ~~Energy efficiency improvement goals.~~ (a)  
7 ~~Through life-cycle cost effective measures, each agency shall~~  
8 ~~reduce energy consumption per gross square foot of its~~  
9 ~~facilities, excluding laboratory facilities, by twenty per cent~~  
10 ~~by January 1, 2007, and thirty per cent by January 1, 2012,~~  
11 ~~relative to calendar year 1990. No facility shall be exempt~~  
12 ~~from these goals unless it meets criteria for exemptions~~  
13 ~~established by the coordinator.~~

14 (b) ~~Through life-cycle cost effective measures, each~~  
15 ~~agency shall reduce energy consumption per square foot, per unit~~  
16 ~~of production, or per other unit as applicable, of its~~  
17 ~~laboratory facilities by fifteen per cent by January 1, 2007,~~  
18 ~~and twenty five per cent by January 1, 2012, relative to~~  
19 ~~calendar year 1995. No facility shall be exempt from these~~  
20 ~~goals unless it meets criteria for exemptions established by the~~  
21 ~~coordinator.~~



1       ~~(c) Each agency shall strive to expand the use of~~  
2       ~~renewable energy within its facilities and in its activities by~~  
3       ~~implementing renewable energy projects and by purchasing~~  
4       ~~electricity from renewable energy sources. Through life-cycle~~  
5       ~~cost-effective measures, each agency shall provide twenty per~~  
6       ~~cent of its remaining energy requirements, after energy~~  
7       ~~efficiency improvement goals have been achieved, with renewable~~  
8       ~~energy resources.~~

9       ~~(d) Through life-cycle cost-effective measures, each~~  
10       ~~agency shall reduce the use of petroleum-generated energy within~~  
11       ~~its facilities. Agencies may accomplish this reduction by~~  
12       ~~switching to less greenhouse gas-intensive or renewable energy~~  
13       ~~sources, by eliminating unnecessary fuel use, or by other~~  
14       ~~appropriate methods. Where alternative fuels are not practical~~  
15       ~~or life-cycle cost-effective, agencies shall strive to improve~~  
16       ~~the efficiency of their facilities.~~

17       ~~(e) The State shall strive to reduce total energy use and~~  
18       ~~associated greenhouse gas and other air emissions, as measured~~  
19       ~~at the source. To that end, agencies shall undertake life-cycle~~  
20       ~~cost-effective projects in which source energy decreases, even~~  
21       ~~if site energy use increases. In those cases, agencies shall~~



1 ~~receive credit toward energy reduction goals through guidelines~~  
2 ~~established by the coordinator.~~

3 ~~(f) Through life-cycle cost effective measures, agencies~~  
4 ~~shall reduce water consumption and associated energy use in~~  
5 ~~their facilities to reach the goals set under this part. Where~~  
6 ~~possible, water cost savings and associated energy cost savings~~  
7 ~~shall be included in energy savings performance contracts and~~  
8 ~~other financing mechanisms.~~

9 ~~(g) Each agency's biennial budget submission shall include~~  
10 ~~funding necessary to achieve the goals of this part. Budget~~  
11 ~~submissions shall include the costs associated with encouraging~~  
12 ~~the use of, administering, and fulfilling agency~~  
13 ~~responsibilities under energy savings performance contracts,~~  
14 ~~utility energy efficiency service contracts, and other~~  
15 ~~contractual provisions for achieving conservation goals~~  
16 ~~implementing life-cycle cost effective measures, procuring life-~~  
17 ~~cycle cost effective products, and constructing sustainably~~  
18 ~~designed new buildings, among other energy costs.~~

19 ~~The director of finance shall issue guidelines to assist~~  
20 ~~agencies in developing appropriate requests that support sound~~  
21 ~~investments in energy improvements and energy using products,~~  
22 ~~and shall consider establishing a fund that agencies may draw on~~



1 ~~to finance exemplary energy management activities and~~  
2 ~~investments with higher initial costs but lower life-cycle~~  
3 ~~costs.~~

4 ~~(h) Each agency shall develop an annual implementation~~  
5 ~~plan for fulfilling the requirements of this part. The plans~~  
6 ~~shall be included in the annual reports to the coordinator." ]~~

7 SECTION 18. Section 196-14, Hawaii Revised Statutes, is  
8 repealed.

9 ~~[ "**~~§196-14~~** **Annual report.** Beginning January 1, 2004,~~  
10 ~~each agency shall measure and report annually to the coordinator~~  
11 ~~on its progress in meeting the requirements of this part.~~

12 ~~The report shall include:~~

13 ~~(1) How the agency is using each of the strategies~~  
14 ~~described in this part to help meet energy and~~  
15 ~~greenhouse gas reduction goals;~~

16 ~~(2) A listing and explanation as to why certain~~  
17 ~~strategies, if any, have not been used; and~~

18 ~~(3) A listing and explanation of exempt facilities." ]~~

19 SECTION 19. Section 196-15, Hawaii Revised Statutes, is  
20 repealed.

21 ~~[ "**~~§196-15~~** **Senior agency official.** Each agency shall~~  
22 ~~designate a senior official to be responsible for meeting the~~





1 ~~goals and requirements of this part, including preparation of~~  
2 ~~the annual report. Designated officials shall participate in~~  
3 ~~the interagency energy policy committee established under~~  
4 ~~section 196-17(c)."]~~

5 SECTION 20. Section 196-16, Hawaii Revised Statutes, is  
6 repealed.

7 ~~["**~~§196-16~~** **Agency energy teams.** Each agency shall form a~~  
8 ~~technical support team consisting of appropriate procurement,~~  
9 ~~legal, budget, management, and technical representatives to~~  
10 ~~expedite and encourage the agency's use of appropriations,~~  
11 ~~energy savings performance contracts, and other alternative~~  
12 ~~financing mechanisms necessary to meet the goals and~~  
13 ~~requirements of this part. Agency energy team activities shall~~  
14 ~~be undertaken in collaboration with each agency's representative~~  
15 ~~to the interagency energy policy committee."]~~

16 SECTION 21. Section 196-17, Hawaii Revised Statutes, is  
17 repealed.

18 ~~["**~~§196-17~~** **Interagency coordination; policy committee.**~~  
19 ~~(a) The coordinator shall be responsible for evaluating each~~  
20 ~~agency's progress in improving energy management and for~~  
21 ~~submitting agency energy scorecards to the governor and the~~  
22 ~~legislature to report progress.~~



1       ~~The coordinator, in consultation [with] other agencies,~~  
2       ~~shall develop the agency energy scorecards and scoring system to~~  
3       ~~evaluate each agency's progress in meeting the goals of this~~  
4       ~~part. The scoring criteria shall include:~~

5       ~~(1) The extent to which agencies are taking advantage of~~  
6       ~~key tools to save energy and reduce greenhouse gas~~  
7       ~~emissions, such as energy savings performance~~  
8       ~~contracts, utility energy efficiency service~~  
9       ~~contracts, ENERGY STAR and other energy efficient~~  
10       ~~products, renewable energy technologies, electricity~~  
11       ~~from renewable energy sources, and other strategies~~  
12       ~~and requirement;~~

13       ~~(2) Overall efficiency;~~

14       ~~(3) Greenhouse gas reduction; and~~

15       ~~(4) Use of other innovative energy efficiency practices.~~

16       ~~The scorecards shall be based on the annual energy reports~~  
17       ~~submitted to the coordinator.~~

18       ~~(b) The coordinator shall be responsible for working with~~  
19       ~~agencies to ensure that they meet the goals of this part and~~  
20       ~~report their progress. The coordinator shall develop and issue~~  
21       ~~guidelines for agencies' preparation of their annual reports to~~  
22       ~~the coordinator on energy management. The coordinator shall~~



1 ~~also have primary responsibility for collecting and analyzing~~  
2 ~~the data and shall ensure that agency reports are received in a~~  
3 ~~timely manner.~~

4 ~~(c) There is established within the department of~~  
5 ~~business, economic development, and tourism, an interagency~~  
6 ~~energy policy committee consisting of senior agency officials,~~  
7 ~~to be chaired by the coordinator. The committee shall be~~  
8 ~~responsible for encouraging implementation of energy efficiency~~  
9 ~~policies and practices. The major energy consuming agencies, as~~  
10 ~~designated by the coordinator, shall participate on the~~  
11 ~~committee. The committee shall communicate its activities to~~  
12 ~~all designated senior agency officials to promote coordination~~  
13 ~~and achievement of the goals of this part." ]~~

14 SECTION 22. Section 196-20, Hawaii Revised Statutes, is  
15 repealed.

16 [~~"§196-20 Facility energy audits. Agencies shall~~  
17 ~~conduct energy and water audits for approximately ten per cent~~  
18 ~~of their facilities each year, either independently or through~~  
19 ~~energy savings performance contracts or utility energy-~~  
20 ~~efficiency service contracts." ]~~

21 SECTION 23. Section 196-24, Hawaii Revised Statutes, is  
22 repealed.



1        [~~"[§196-24] Electricity use. To advance the greenhouse~~  
2 ~~gas and renewable energy goals of this part, and reduce source~~  
3 ~~energy use, each agency shall strive to use electricity from~~  
4 ~~clean, efficient, and renewable energy sources. An agency's~~  
5 ~~efforts in purchasing electricity from efficient and renewable~~  
6 ~~energy sources shall be taken into account in assessing the~~  
7 ~~agency's progress and formulating its scorecard under section~~  
8 ~~196-17(a).~~"]

9        SECTION 24. Section 196-25, Hawaii Revised Statutes, is  
10 repealed.

11       [~~"[§196-25] Competition. Agencies shall take advantage of~~  
12 ~~competitive opportunities in the electricity and natural gas~~  
13 ~~markets to reduce costs and enhance services. Agencies are~~  
14 ~~encouraged to aggregate demand across facilities or agencies to~~  
15 ~~maximize their economic advantage.~~"]

16       SECTION 25. Section 196-26, Hawaii Revised Statutes, is  
17 repealed.

18       [~~"[§196-26] Reduced greenhouse gas intensity of electric~~  
19 ~~power. When selecting electricity providers, agencies shall~~  
20 ~~purchase electricity from sources that use high efficiency~~  
21 ~~electric generating technologies when life-cycle cost effective.~~  
22 ~~Agencies shall consider the greenhouse gas intensity of the~~



1 ~~source of the electricity and strive to minimize the greenhouse~~  
2 ~~gas intensity of purchased electricity." ]~~

3 SECTION 26. Section 196-27, Hawaii Revised Statutes, is  
4 repealed.

5 ~~[ "**[§196-27] Purchasing electricity from renewable energy**~~  
6 ~~**sources.** Each agency shall evaluate its current use of~~  
7 ~~electricity from renewable energy sources and report this level~~  
8 ~~in its annual report to the coordinator. Based on this review,~~  
9 ~~each agency shall adopt policies and pursue projects that~~  
10 ~~increase the use of such electricity. Agencies shall include~~  
11 ~~provisions for the purchase of electricity from renewable energy~~  
12 ~~sources as a component of their requests for bids whenever~~  
13 ~~procuring electricity. Agencies may use savings from energy~~  
14 ~~efficiency projects to pay additional incremental costs of~~  
15 ~~electricity from renewable energy sources.~~

16 ~~In evaluating opportunities to comply with this section,~~  
17 ~~agencies shall consider any renewable portfolio standard~~  
18 ~~specified in the restructuring guidelines for the State and the~~  
19 ~~United States Environmental Protection Agency guidelines on~~  
20 ~~crediting renewable energy power." ]~~

21 SECTION 27. Section 196-28, Hawaii Revised Statutes, is  
22 repealed.



1       ~~["**[§196-28] Mobile equipment.** Each agency shall seek to~~  
2 ~~improve the design, construction, and operation of its mobile~~  
3 ~~equipment, and shall implement all life-cycle cost-effective~~  
4 ~~energy efficiency measures that result in cost savings while~~  
5 ~~improving mission performance. To the extent that such measures~~  
6 ~~are life-cycle cost-effective, agencies shall consider enhanced~~  
7 ~~use of alternative or renewable-based fuels."]~~

8       SECTION 28. Section 196-29, Hawaii Revised Statutes, is  
9 repealed.

10       ~~["**[§196-29] Management strategies.** Agencies shall use the~~  
11 ~~following management strategies in meeting the goals of this~~  
12 ~~part:~~

- 13       ~~(1) Employee incentive programs to reward exceptional~~  
14 ~~performance in implementing this part;~~  
15       ~~(2) Performance evaluations of successful implementation~~  
16 ~~of this part in areas such as energy savings~~  
17 ~~performance contracts, sustainable design, energy~~  
18 ~~efficient procurement, energy efficiency, water~~  
19 ~~conservation, and renewable energy projects and~~  
20 ~~performance evaluations of agency heads, members of~~  
21 ~~the agency energy team, principal program managers,~~



1 ~~heads of field offices, facility managers, energy~~  
2 ~~managers, and other appropriate employees;~~

3 ~~(3) Agencies shall be allowed to retain a portion of~~  
4 ~~savings generated from efficient energy and water~~  
5 ~~management and shall use the savings at the facility~~  
6 ~~or site where the savings occur to provide greater~~  
7 ~~incentives for that facility and its site managers to~~  
8 ~~undertake more energy management initiatives, invest~~  
9 ~~in renewable energy systems, and purchase electricity~~  
10 ~~from renewable energy sources;~~

11 ~~(4) Training and education shall be provided for all~~  
12 ~~appropriate personnel relating to the energy~~  
13 ~~management strategies contained in this part,~~  
14 ~~including the incorporation into existing procurement~~  
15 ~~courses information on energy management tools,~~  
16 ~~energy savings performance contracts, utility energy-~~  
17 ~~efficiency service contracts, energy efficient~~  
18 ~~products, and life-cycle cost analysis; and~~

19 ~~(5) Agencies shall designate showcase facilities to~~  
20 ~~highlight energy or water efficiency and renewable~~  
21 ~~energy improvements." ]~~



## 1 PART IV. COUNTY BUILDING PERMITS AND LEADERSHIP

## 2 IN ENERGY AND ENVIRONMENTAL DESIGN PRIORITY PROCESSING

3 SECTION 29. Chapter 46, Hawaii Revised Statutes, is  
4 amended by adding a new section to be appropriately designated  
5 and to read as follows:

6 **"§46- County building permits; incorporation of**  
7 **leadership in energy and environmental design building standards**  
8 **in project design; priority processing.** (a) Each county agency  
9 that issues building, construction, or development-related  
10 permits shall establish a procedure for the priority processing  
11 of a permit application submitted by a private entity for a  
12 construction project that incorporates leadership in energy and  
13 environmental design building standards into its project design.  
14 The permit processing procedure shall give priority to private  
15 sector permit applicants at no additional cost to the applicant.  
16 Any priority permit processing procedure established by a county  
17 pursuant to this section shall not imply or provide that any  
18 permit application filed under the priority processing procedure  
19 shall be automatically approved.

20 (b) For the purposes of this section:





1       "Leadership in energy and environmental design building  
2       standards" means the green building rating system established by  
3       the United States Green Building Council.

4       "Private entity" means any permit applicant that is not the  
5       State, county, federal government, or any political subdivision  
6       thereof."

7                       PART V.   SOLAR WATER HEATING PAY AS YOU SAVE

8               SECTION 30.   **Solar water heating pay as you save program;**  
9       **purpose; establishment; tariff filing.**   (a)   Solar water heating  
10       systems are a renewable energy technology that uses solar  
11       collectors placed on roofs to heat water.   These systems  
12       decrease reliance on imported oil used to generate electricity  
13       or gas to heat water because they use less energy than the  
14       electric or gas hot water heating systems replaced.

15               The legislature finds that the upfront cost of installation  
16       is a barrier preventing many Hawaii residents from installing  
17       solar water heating systems.   The legislature further finds that  
18       the renewable energy income tax credit and electric utility  
19       rebates have not been enough of an incentive to overcome these  
20       upfront costs, especially for rental housing and homes in need  
21       of retrofit for these important energy saving devices.



1       The purpose of this section is to authorize the public  
2       utilities commission to implement a pilot project to be called  
3       the "solar water heating pay-as-you-save program."

4       (b) The public utilities commission shall implement a  
5       pilot project to be called the "solar water heating pay-as-you-  
6       save program", which shall:

7       (1) Allow a residential electric utility customer to  
8       purchase a solar water heating system:

9       (A) With no upfront payments; and

10       (B) By paying the cost of the system over time on the  
11       customer's electric or gas bill;

12       provided that the estimated electricity or gas savings  
13       from the solar water heating system exceeds the cost  
14       of the system;

15       (2) Provide for billing and payment of the solar water  
16       heating system on the utility bill;

17       (3) Provide for disconnection of utility service for non-  
18       payment of solar water heating system pay-as-you-go  
19       payments; and

20       (4) Allow for assignment of system repayment costs  
21       attached to the meter location.



1 (c) The public utilities commission shall determine the  
2 time frame of the pilot program and shall gather and analyze  
3 information to evaluate the pilot program.

4 (d) No later than June 30, 2007, each electric utility  
5 shall implement by tariff a pay-as-you-save model system program  
6 for residential consumers that is consistent with this section,  
7 or a similar program for residential customers that meets the  
8 objectives of this section. Each utility shall provide at least  
9 six months' prior notice of its proposed tariff to the public  
10 utilities commission as prescribed in section 269-12(b), Hawaii  
11 Revised Statutes. Within the prescribed notice period, the  
12 public utilities commission shall review the proposed tariff  
13 and, after a hearing, may require modifications to the proposed  
14 tariff as is necessary to comply with or effectuate the purposes  
15 of this section.

16 (e) The commission shall ensure that all reasonable costs  
17 incurred by electric utilities to start up and implement the  
18 pay-as-you-save model system are recovered as part of the  
19 utility's revenue requirement, including but not limited to  
20 necessary billing system adjustments and any costs for pay-as-  
21 you-save model system efficiency measures that are not recovered



1 via participating residential consumers' pay-as-you-save model  
2 system bill payments or otherwise.

3 SECTION 31. This Act does not affect rights and duties  
4 that matured, penalties that were incurred, and proceedings that  
5 were begun, before its effective date.

6 SECTION 32. Statutory material to be repealed is bracketed  
7 and stricken. New statutory material is underscored.

8 SECTION 33. This Act shall take effect on July 1, 2010;  
9 provided that section 2 of this Act shall apply to taxable years  
10 beginning after December 31, 2005; and provided further that the  
11 increased tax credits established in section 2 of this Act shall  
12 be available only to eligible renewable energy technology  
13 systems installed after July 1, 2006.



HB 2175  
HD 2

**Report Title:**

Energy Efficiency; Renewable Energy; Alternate Fuel

**Description:**

Provides a framework for energy self-sufficiency, focusing on energy efficiency and renewable energy resource deployment in state facilities, vehicles, and equipment; in the public schools; through the renewable energy technologies income tax credit; by means of priority permitting for renewable energy projects at the county level; and through the establishment of a solar water heating pay as you save program. (HB2175 HD2)

